REMARKS/ARGUMENTS

Claims 1-12 and 32-40 are present in this application. By this Amendment, claims 4, 6, 9 and 36 have been amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Claims 36-40 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,014,455 to Sumioshi et al. This rejection is respectfully traversed.

Claim 36 defines a projection exposure apparatus including an error detector communicating with an imagery characteristic correction mechanism that determines a projection error of the pattern in accordance with a driven amount of the projection optical system by the imagery characteristic correction mechanism. A movable stage retains the substrate, and a correction mechanism is connected to the error detector that controls a position of the stage to correct the projection error. See, e.g., page 20, lines 25-27 of the specification. In contrast, the system described in Sumioshi only adjusts one or more lens groups to correct any projection magnification or distortion error. Without conceding the conclusions therein, the Office Action recognized these teachings in Sumioshi in paragraph 3, referring to column 6, lines 13-42 and column 6, lines 55-65. Sumioshi is silent with respect to any control of a stage that retains the substrate to correct the projection error.

Moreover, Sumioshi lacks any suggestion to modify its system to incorporate such structure. Rather, Sumioshi describes the effects of lens group adjustments in significant detail. See, for example, Tables 1 and 2 in columns 4 and 5 of Sumioshi. As a

consequence, Sumioshi in fact teaches away from any modification to meet the noted features of the present invention, since to do so would be contrary to Sumioshi's express intended functionality.

With respect to dependent claims 37-40, Applicant respectfully submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1-8, 32, 33 and 36-40 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,105,075 to Ohta et al. This rejection is respectfully traversed.

Claim 1 defines, *inter alia*, an alignment signal processor communicating with the substrate position detector and the image-forming displacement detector. The alignment signal processor corrects the detection result of the substrate position detector based on the displacement amount of the image-forming position obtained by the image-forming displacement detector. That is, as described in the present specification, for example, the alignment signal processor 24 receives the calculation result of the displacement of the image-forming position caused by driving the imagery characteristic correction mechanism from the master control system 19. The alignment signal processor 24 adds the displacement of the image-forming position to the coordinates of the wafer mark obtained from the measurement result of the laser interferometer (or other substrate position detector) to further correct the coordinate of the wafer mark. See, for example, page 20, lines 18-24. At least this subject matter is neither taught nor suggested in the

Ohta patent. Indeed, the Office Action does not refer to a single teaching in the Ohta patent that may even arguably correspond to the claimed alignment signal processor.

Ohta, in contrast, describes a microprocessor 23 that receives signals corresponding to pressure, temperature, humidity and lens temperature and subsequently determines an amount of movement of the reticle 1 and an amount of movement of the field lens 6 in accordance with predetermined conditioning equations. See column 10, lines 12-20. Ohta further describes that signals from a reticle position detector 15 and a lens position detector 17 are applied to the microprocessor 23, and in response, the microprocessor 23 supplies position signals to drive a position of the reticle 1 and the field lens 6. Although the Ohta patent arguably detects a position of the wafer 9 by a focus detector 18 (see column 6, lines 64-66), Ohta lacks any structure or function that effects a correction of the detection result of a substrate position detector, which correction is based on the displacement amount of the image-forming position obtained by an image-forming displacement detector. Since at least this structure is neither taught nor suggested in the Ohta patent, Applicant respectfully submits that the rejection is misplaced.

Moreover, although Ohta describes that the wafer drive control system 14 applies a control signal to the wafer driving device 11 to move the wafer 9 to a focus position of the pattern image, this movement is in response to the corrected positions of the reticle 1 and field lens 6. Indeed, since Ohta specifically embodies projection magnification and distortion error by adjustment of the reticle 1 and the field lens 6, the fact that Ohta

subsequently describes that the wafer can then be adjusted to a focus position of the pattern image teaches away from any modification of the Ohta apparatus to meet the subject matter of the claimed invention. Rather, as noted, Ohta merely adjusts a position of the wafer 9 at the focus position as a consequence of the projection magnification and distortion error correction by movement of the reticle 1 and field lens 6.

With respect to independent claim 36, like the Sumioshi patent, Ohta lacks any teaching or suggestion of the claimed correction mechanism that controls a position of a stage retaining substrate to correct a projection error. Rather, Ohta specifically describes that projection magnification and distortion errors can be corrected by adjusting a position of the reticle 1 and the field lens 6. See, for example, column 10, lines 42-48.

With respect to the dependent claims, Applicant submits that these claims are allowable at least by virtue of their dependency on an allowable independent claim.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 4 and 6 have been amended to reflect antecedent basis for the optical axis.

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims are patentable over the art of record and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Prompt passage to issuance is earnestly solicited.

Respectfully submitted,

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